SERVICE DATA and REPAIR PARTS LIST

SEARS | Silvertone®

TELEVISION CHASSIS 456.60542 528.60542 529.60542 456.60543 528.60543 529.60543

HOW TO ORDER PARTS

Replacement parts may be ordered through any Sears, Roebuck and Co., Retail or Catalog Order Store. Prices available upon application.

For Parts Or Service From Our Retail Or Catalog Order Stores Always Give Chassis Number
SEE LABEL ON CHASSIS
SEARS, ROEBUCK AND CO. U.S.A.
AND SIMPSONS-SEARS LIMITED

WHEN ORDERING PARTS, ALWAYS GIVE: 1. The Part Number. 2. The Description. 3. The Chassis Number. 4. The Model Number. The Chassis Number will be found on a label on each chassis. The Model Number will be found on the back, inside or bottom of the cabinet.

SEARS, ROEBUCK and CO.

S54

PRINTED IN U.S.A.

PART NO. 38-6223-4

TUNER PARTS LIST

95-370-0 VHF TUNER
95-379-0 UHF TUNER (Chassis 456.60542 528.60542 529.60542)
or 95-365-0 UHF TUNER (Chassis 456.60543 528.60543 529.60543)

VHF TUNER SECTION 95-370-0

Schematic Location	Part Number	Description
	CAPACITORS	
C201A,B,C,D,	††	Disc, 27 mmfd.
C202	46-20441	Feed thru, 20 mmfd.
C203	46-2020	Disc, 8.2 mmfd.
C204	46-20440	Gimmick, 3 mmfd.
C205	46-20425	Feed thru, 47 mmfd.
C206	46-20444	Feed thru, 18 mmfd.
C207	46-20449	Disc, 33 mmfd.
C208	46-20442	Disc, 2.2 mmfd.
C209	46-20206	Disc, 6.8 mmfd.
C210	46.20428	Feed thru, .001 mfd.
C211,C212,C213 C214,C215,C216	46-2017	Feed thru, .001 mfd.
C217	46-2068	Feed thru, .001 mfd.
C218	46-20443	Feed thru, 1.5 mmfd.
	RESISTORS	
R201	46-63210	47K ohm
R202	46-638	1.2K ohm
R203,R204,R205	46-6311	15K ohm
R206	46-639	1K ohm
R207	46-6314	220K ohm
R208	†††	6.8K ohm
	TRANSFORMERS AND COILS	
T201	††	Antenna Input Transformer
L201	††	Coil Antenna Trap
L202	††	Coil Antenna Trap
L203	††	Coil Antenna Trap
L204	46-10314	Rejection Coil
L205	46-1912	Fine Tuning Coil Assembly
L206	46-10499	Coil Mixer
L207	46-10291	Coil I.F. Output
	WOUND CHANNEL STICKS	
	COLOR CODE (on forward edge of stick)	
Channel UHF	46-10494	Brown
Channel 2	46-10493	Red
Channel 3	46-10492	Orange
Channel 4	46-10495	Yellow
Channel 5	46-10491	Green
Channel 6	46-10490	Blue
Channel 7	46-10489	Violet
Channel 8	46-10488	Yellow
Channel 9	46-10487	White (None)
Channel 10	46-10486	Black
Channel 11	46-10498	Double Brown
Channel 12	46-10497	Double Red
Channel 13	46-10496	Double Orange

UHF TUNER SECTION 95-365-0

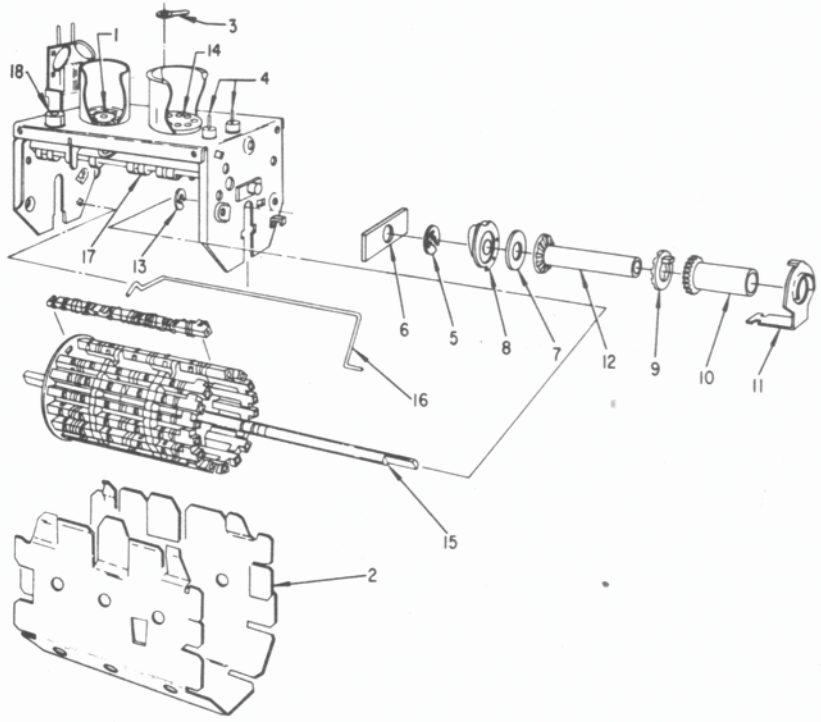
Schematic Location	Part Number	Description
	RESISTORS	
R301	46-63215	680K ohm
R302	46-63216	6.8K ohm
R303	46-63217	10K ohm
R304	46-632 18	1K ohm
	CAPACITORS	
C302A,B,C,	**	Tuning Capacitor
C303	46-204	33 mmfd., 10%
C304	46-20451	800 mmfd., G.M.V.
C305	20-9-3	.001 mfd., G.M.V.
C306	**	1.5 mmfd., Trimmer
C307	46-20452	2.2 mmfd.
C308	**	Trimmer
	TRANSISTOR	
TR301	86-138-2	(Fairchild #3002)
	COILS AND DIODES	
L301	**	Antenna Loop
L302	46-102	I.F. Tap Coil
L303	46-1010	I.F. Coil
L304	***	Crystal Coupling
D301	86-12-1	Diode

UHF TUNER SECTION 95-379-0

	CAPACITORS	
C401A,B,C	**	Variable Tuning Capacitor
C402	46-20191	39 mmfd.
C403,C404	46-20450	.001 mfd.
C405	46-20197	2.2 mmfd.
C406,C407	**	Trimmers
	RESISTORS	
R401	*	820K ohm
R402	*	3.3K ohm
R403	*	10K ohm
R404	46-634	620 ohm
	TRANSISTOR	
TR401	86-138-2	(Fairchild #3002)
	COILS AND DIODES	
L401	**	Antenna Coil
L402	**	Coupling Coil
L403	46-10502	Coupling Coil
L404	*	Collector Coil
D401	46-8613	Diode

† See Miscellaneous UHF Tuner Parts List
†† Supplied as part of Trap Assembly only. Order part number 46-8416, Trap Assembly.
††† Not a Service Item.

* Part of Assembly order Part Number 46-8494.
** Not a service item.
*** Part of Crystal Board Assembly



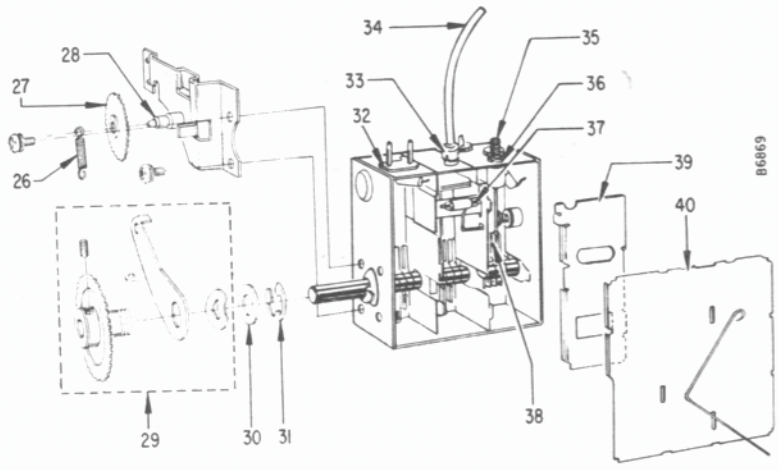
VHF TUNER EXPLODED VIEW (95-370-0)

MISCELLANEOUS VHF TUNER PARTS (95-370-0)

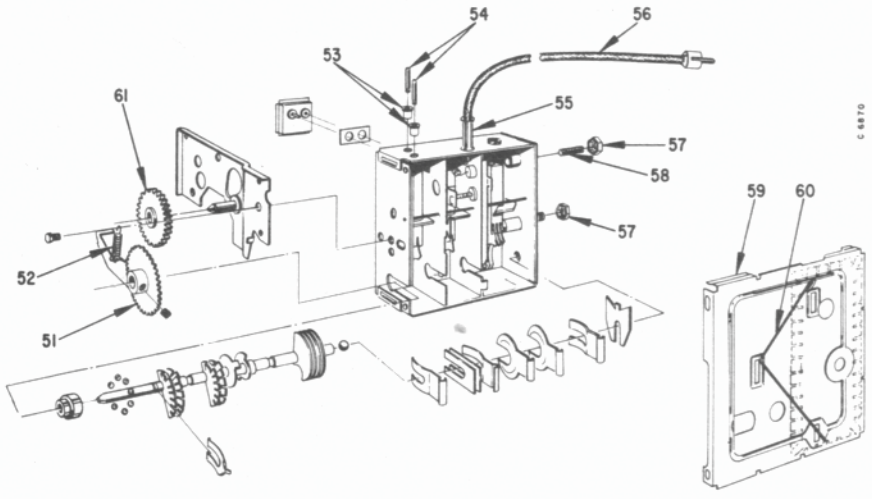
Key No.	Part No.	Description
1	46-4593	Socket, Tube
2	46-212	Cover
3	46-454	Lug
4	46-226	Feed thru Pins
5	46-582	"C" Washer
6	46-311	Bearing Plate
7	46-5819	Washer
8	46-39134	Fine Tuning Cam
9	46-20268	Transfer Disc.
10	46-39132	UHF Dial Shaft
11	46-2245	Link
12	46-39133	Shaft Input
13	46-2210	"C" Retainer
14	46-4545	Socket, Tube
15	46-39175	Shaft Assembly
16	46-704	Detent Spring
17	46-8416	Trap Assembly
18	46-456	Phono Plug
19	46-392	Idler Gear (95-365-0)
	3982-1	Idler Gear (95-379-0)
20	46-702	Spring Tension (95-365-0)
	4028-1	Spring Tension (95-379-0)
21	46-844	Gear & Lever Assy. (95-365-0)
	4003-501	Gear & Lever Assy. (95-379-0)

MISCELLANEOUS UHF TUNER PARTS (95-365-0)

Key No.	Part No.	Description
26.	46-702	Spring Tension
27.	46-392	Idler Gear
28.	46-771	Idler Stud
29.	46-844	Gear & Lever Assembly
30.	46-581	Washer, Phenolic (Part of gear & lever Assembly)
31.	46-222	Retainer "E" Washer Part of gear & lever Assembly
32.	84-14561	Antenna Board Assembly
33.	45-14-1	Phono Jack
34.	46-231	I.F. Cable
35.	97-1011	Trimmer Screw
36.	22-260-2	Palnut
37.	46-841	Crystal Board Assembly
38.	46-843	Oscillator Line Assembly
39.	21-1133-0	Inner Cover
40.	21-1134-0	Front Cover



UHF TUNER EXPLODED VIEW (95-365-0)



UHF TUNER EXPLODED VIEW (95-379-0)

MISCELLANEOUS UHF TUNER PARTS (95-379-0)

Key No.	Part No.	Description
51	46-8431	Clutch Assembly
52	46-7012	Spring Return
53	46-261	Bushings
54	46-497	Contact Pins
55	46-4922	Ferrule I.F.
56	46-2331	Coax Cable
57	46-562	Nut
58	46-9724	Trimmer Screw
59	46-2155	Cover
60	46-7074	Spring Cover
61	46-39179	Idler Gear

DIVISION 57 TELEVISION
STANDARD NOMENCLATURE

CHASSIS NOS. 456.60542 528.60542 529.60542
456.60543 528.60543 529.60543

528.60558

INDEX OF ADDITIONAL INFORMATION	
ITEM	SECTION
SCHEMATIC DIAGRAM	FOLD OUT
CABINET PARTS LIST (BY MODEL NUMBER)	B
ALIGNMENT AND SERVICE ADJUSTMENTS TUBE AND WIRING CHASSIS VIEWS	D139
CIRCUIT BOARD DIAGRAMS	C300

USED IN MODELS

5110 5115 5119
5112 5116 5122
5113 5117 5123
5114 5118

ALL ORDERS MUST INCLUDE THE PART NUMBER, DESCRIPTION OF PART, AND CHASSIS NUMBER. DO NOT GIVE SCHEMATIC LOCATION NUMBER.

CHASSIS REPAIR PARTS LIST

Schematic Location	Part Number	Description
		CAPACITORS (All Capacitors 500V., 20% unless otherwise noted)
C1,C11,C15	12-103774-6	Disc, .01 mfd., +80% -20%
C2,C16	12-502704-6	Disc, .005 mfd., Z5U
C3	12-151761-3	Disc, 150 mmfd., 10%, Z5F
C4	12-829294-2	Disc, 8.2 mmfd., +1 mmfd., N750
C5	12-102704-6	Disc, .001 mfd., Z5U
C6	12-369271-2	Disc, 3.6 mmfd., ±.25 mmfd., NPO
C7	12-470704-4	Disc., 47 mmfd., Z5U
C8	20-1-0	Tubular, 1.5 mmfd., NPO (Gimmick)
C9,C14,C18, C21	12-102774-3	Disc, .001 mfd., +80% –20%
C10	20-206-1	Tubular, .1 mfd., 100V.
C12	12-203774-6	Disc, .02 mfd., +80% –20%
C13	12-102704-3	Disc, .001 mfd., Z5U
C17	12-221764-4	Disc, 220 mmfd., 10%, Z5U
C19	20-169-1	Mylar, .047 mfd., 200V.
C20	20-479-0	Disc, 560 mmfd., 10%, Z5F
C22	12-502774-6	Disc, .005 mfd., +80% –20%, Z5U
C23	20-477-0	Disc, 470 mmfd., 10%, Z5F
C24	20-159-1	Tubular, .22 mfd., 100V.
C25	20-605-0	Disc, 330 mmfd.
C26	20-27-0	Gimmick 6.8 mmfd., ±10%, NPO
C27	20-23-0	Gimmick, 4.7 mmfd.
C51,C53	12-560704-3	Disc, 56 mmfd., Z5U
C52,C54,C61	12-222704-6	Disc, .0022 mfd.
C56	12-251764-3	Disc, 250 mmfd., 10%, Z5U
C57	20-545-0	Tubular, .0039 mfd., 10%, 100V., A.C. 15750 cycles
C58	20-284-1	Polyfilm, 200 mmfd., 10%
C59	12-502704-6	Disc, .005 mfd., Z5U
C60	20-157-1	Tubular, .1 mfd., 400V.
C62	20-206-1	Tubular, .1 mfd., 100V.
C63	20-279-1	Polyfilm, 680 mmfd., 5%
C64	20-258-1	Tubular, .068 mfd., 400V.
C65	20-156-1	Tubular, .1 mfd., 200V.
C66	12-103894-8	Disc, .01 mfd., 1Kv., GMV., Z5U
C67	12-682774-4	Disc, .0068 mfd., +80% –20%
C69	20-293-1	Tubular, .0039 mfd., 100V.
C70	20-270-1	Tubular, .022 mfd., 10%, 400V.
C73	20-177-1	Tubular, .01 mfd., 10%, 400V.
C74	20-292-1	Tubular, .027 mfd., 100V.
C77	12-102764-6	Disc, .001 mfd., 10%, Z5U
C80	20-259-1	Tubular, .1 mfd., 10%, 600V.
C101	12-103854-6	Disc, .01 mfd., 1KV.
C102	20-184-1	Mylar, .22 mfd., 400V.
X– C103	20-366 ~~20-447-1~~	Tubular, .047 mfd., 400V.
X– C104	~~12-502724-6~~ 20-13-3 46-204-24	~~Disc, .005 mfd., +80% –20%~~ Feed Thru, .001 mfd. GMV.

Schematic Location	Part Number	Description
C105	18-204-5	Electrolytic 200 mfd., 175V. (A) 300 mfd., 175V (B) 20 mfd., 150V (C&D)
C106	20-276-1	Plastic Molded .025 mfd., 600V.
C107	20-137-0	Disc, 200 mmfd., 3Kv., N1600
C108	12-271516-8	Disc, 270 mmfd., 3Kv., N1600
C109	20-265-1	Mylar, .1 mfd., 200V.
C150	*	Replace with exact value of part removed
		RESISTORS (All Resistors 1/2w, 10%, unless otherwise noted)
R1	63-56401	560K ohm
R3,R19	63-33101	330 ohm
R4,R13 R18,R27	63-10201	1K ohm
R5,R11	63-56101	560 ohm
R6,R26	63-10401	100K ohm
R7	63-47201	4.7K ohm
R8,R23	63-10501	1 megohm
R9	63-47401	470K ohm
R10	63-22401	220K ohm
R12	68-47251	4.7K ohm, Fused Oxide, 5W.
R14	63-27401	270K ohm
R15	63-39301	39K ohm
R16	63-15401	150K ohm
R17	63-22101	220 ohm
R20	63-56201	5.6K ohm
R21	63-56001	56 ohm
R22	63-56201	5.6K ohm
R24	63-68201	6.8K ohm
R29	63-22501	2.2 megohm
R51	24-570	1K ohm, Horizontal Frequency
R53,R79	63-68401	680K ohm
R54	63-10501	1 megohm
R55	63-27401	270K ohm
R56,R74	63-18201	1.8K ohm
R57	63-33201	3.3K ohm
R58	63-68201	6.8K ohm
R59	63-56301	56K ohm
R60	63-12301	12K ohm
R61	63-68301	68K ohm
R63	63-12401	120K ohm
R65	68-18401	180K ohm
R66,R78,R83	63-10401	100K ohm
R68	63-47301	47K ohm
R69,R72	63-27301	27K ohm

FILING INSTRUCTIONS

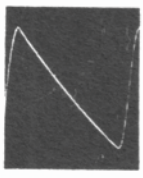
File this page in numerical order in the "A" Section of the Standard Nomenclature Division 57 Television Black Binder.

Refer to the Div. 57 Authorized Price List 528.00 for current selling prices, availability and ordering information.

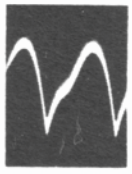
SF57–

SEARS, ROEBUCK and CO.

A 6401


WF-1

18V P-P
30 ∿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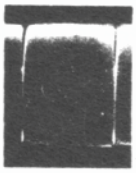
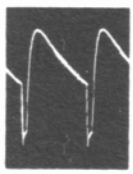
.64V P-P
30 ∿


WF-3

85V P-P
30 ∿

WF-4

4V P-P
7875 ∿


WF-5

10V P-P
7875 ∿

WF-6

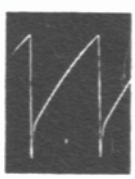
290V P-P
30 ∿

WF-7

104V P-P
7875 ∿

WF-8

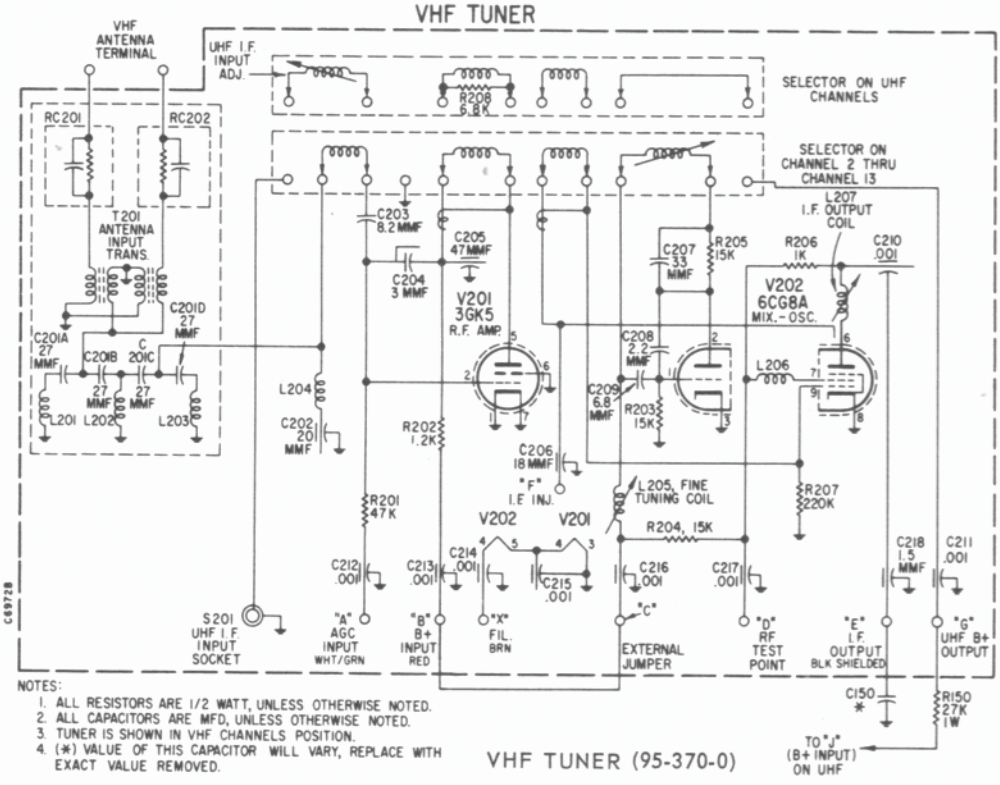
21V P-P
7875 ∿


WF-9

30V P-P
30 ∿

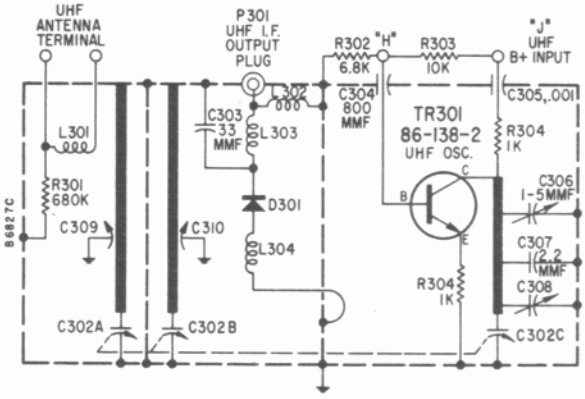
13

VHF TUNER

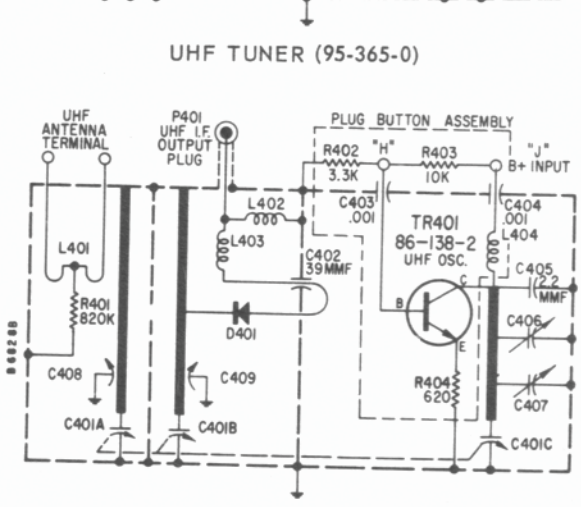


NOTES:
1. ALL RESISTORS ARE 1/2 WATT, UNLESS OTHERWISE NOTED.
2. ALL CAPACITORS ARE MFD, UNLESS OTHERWISE NOTED.
3. TUNER IS SHOWN IN VHF CHANNELS POSITION.
4. (*) VALUE OF THIS CAPACITOR WILL VARY, REPLACE WITH EXACT VALUE REMOVED.

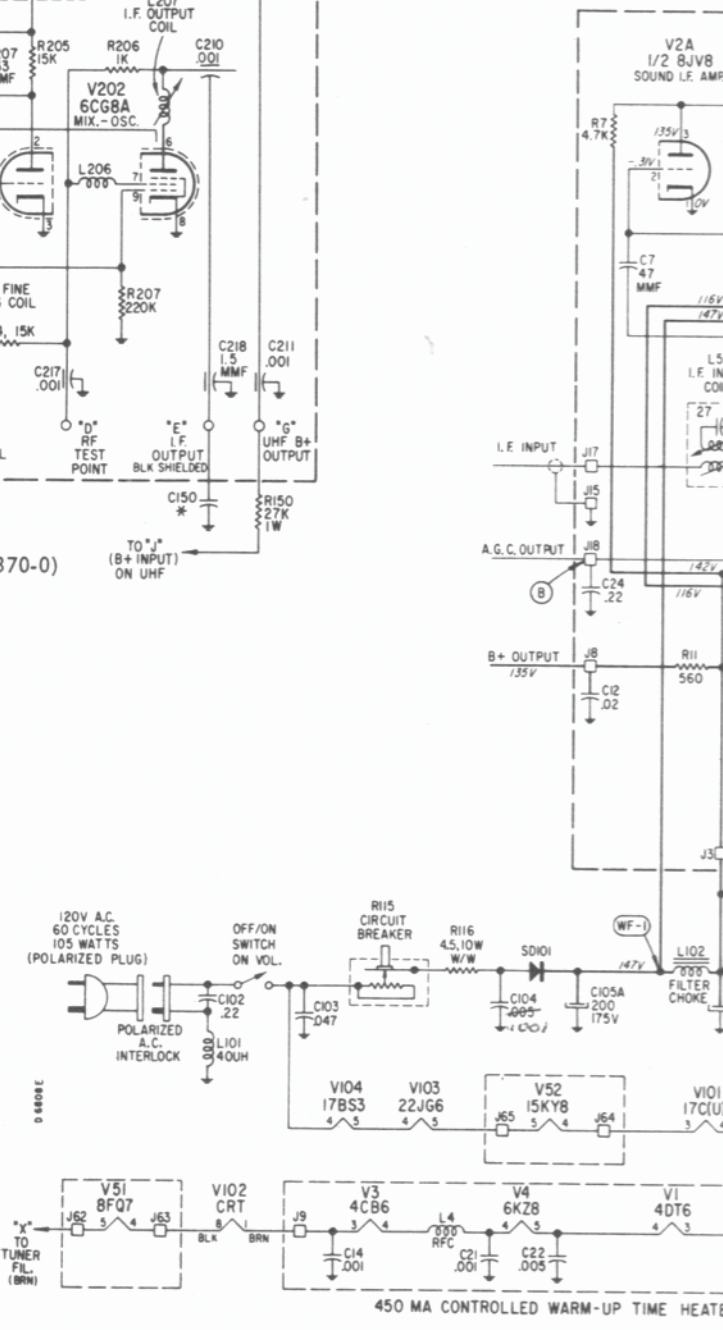
VHF TUNER (95-370-0)



UHF TUNER (95-365-0)



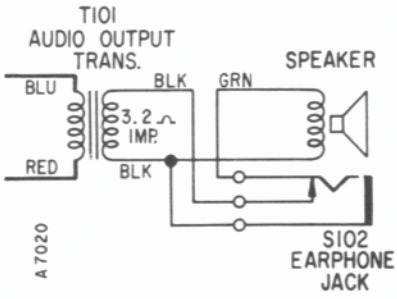
UHF TUNER (95-379-0)



450 MA CONTROLLED WARM-UP TIME HEATE

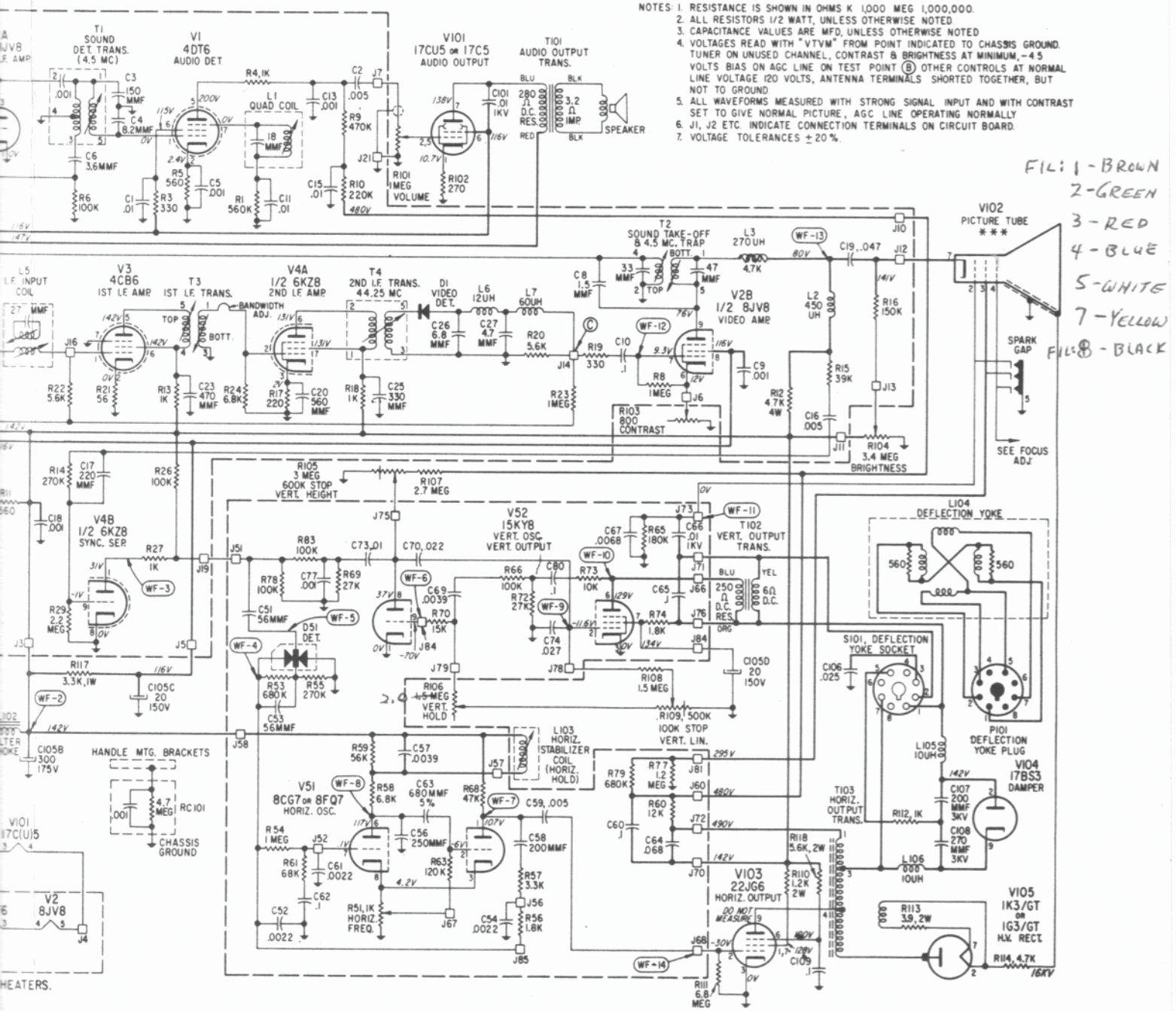
PRINTED IN U.S.A.

CHASSIS 456.60542 528.60542 529.60542
NOS. 456.60543 528.60543 529.60543



NOTES: 1. RESISTANCE IS SHOWN IN OHMS K 1,000 MEG 1,000,000.
2. ALL RESISTORS 1/2 WATT, UNLESS OTHERWISE NOTED
3. CAPACITANCE VALUES ARE MFD, UNLESS OTHERWISE NOTED
4. VOLTAGES READ WITH "VTVM" FROM POINT INDICATED TO CHASSIS GROUND. TUNER ON UNUSED CHANNEL, CONTRAST & BRIGHTNESS AT MINIMUM, -4.5 VOLTS BIAS ON AGC LINE ON TEST POINT (8) OTHER CONTROLS AT NORMAL LINE VOLTAGE 120 VOLTS, ANTENNA TERMINALS SHORTED TOGETHER, BUT NOT TO GROUND
5. ALL WAVEFORMS MEASURED WITH STRONG SIGNAL INPUT AND WITH CONTRAST SET TO GIVE NORMAL PICTURE, AGC LINE OPERATING NORMALLY
6. J1, J2 ETC. INDICATE CONNECTION TERMINALS ON CIRCUIT BOARD.
7. VOLTAGE TOLERANCES ± 20 %.

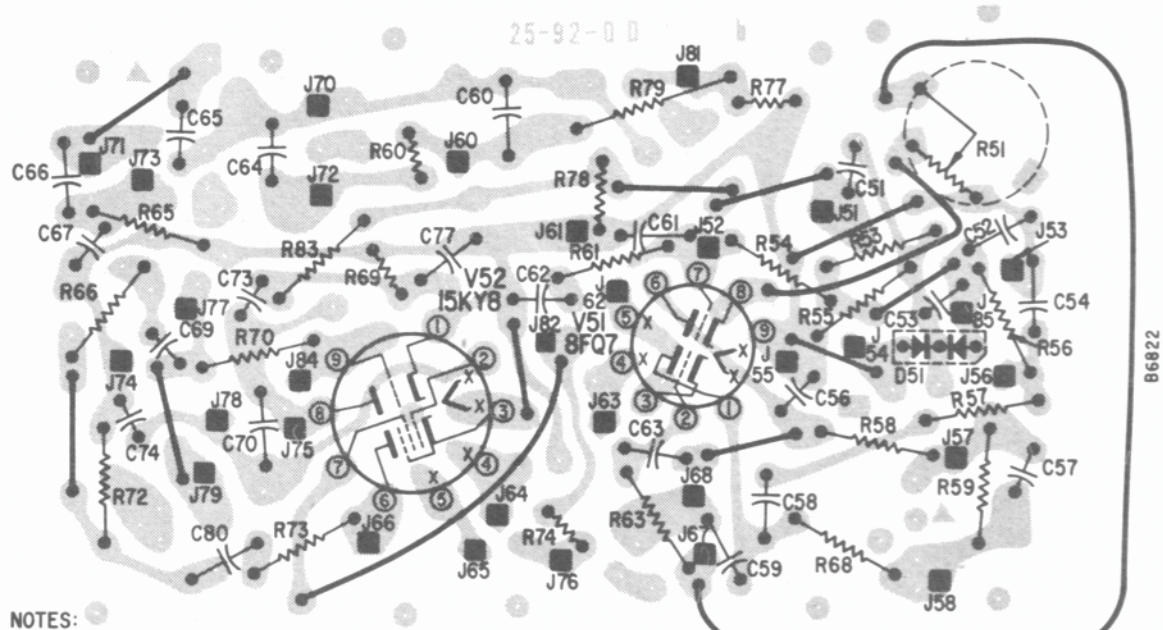
FIL: 1 - BROWN
2 - GREEN
3 - RED
4 - BLUE
5 - WHITE
7 - YELLOW
FIL 8 - BLACK


T1 SOUND DET. TRANS. (4.5 MC)
V1 4DT6 AUDIO DET.
V101 17CU5 or 17C5 AUDIO OUTPUT
T101 AUDIO OUTPUT TRANS.
SPEAKER
R101 1MEG VOLUME
R102 270
V3 4CB6 1ST I.F. AMP
T3 1ST I.F. TRANS.
V4A 1/2 6KZ8 2ND I.F. AMP
T4 2ND I.F. TRANS. 44.25 MC
D1 VIDEO DET.
T2 SOUND TAKE-OFF & 4.5 MC. TRAP
L3 270 UH
V2B 1/2 8JV8 VIDEO AMP
V102 PICTURE TUBE ***
SPARK GAP
SEE FOCUS ADJ
R103 800 CONTRAST
R104 3.4 MEG BRIGHTNESS
V4B 1/2 6KZ8 SYNC. SEP.
V52 15KY8 VERT. OSC. VERT. OUTPUT
T102 VERT. OUTPUT TRANS.
R105 3 MEG 600K STOP VERT. HEIGHT
R107 2.7 MEG
R106 4.5 MEG VERT. HOLD
R109, 500K 100K STOP VERT. LIN.
R108 1.5 MEG
L104 DEFLECTION YOKE
S101, DEFLECTION YOKE SOCKET
P101 DEFLECTION YOKE PLUG
L103 HORIZ. STABILIZER COIL (HORIZ. HOLD)
V51 8CG7 or 8FQ7 HORIZ. OSC.
T103 HORIZ. OUTPUT TRANS.
V103 22JG6 HORIZ. OUTPUT
V104 17BS3 DAMPER
V105 1K3/GT or 1G3/GT H.V. RECT.
L105 10UH
L106 10UH
HANDLE MTG. BRACKETS
CHASSIS GROUND
V2 8JV8
HEATERS.

*** 19" Picture Tube - 19DQP4 - 19AXP4 - 19DWP4
See Cabinet Parts List for exact picture type used.

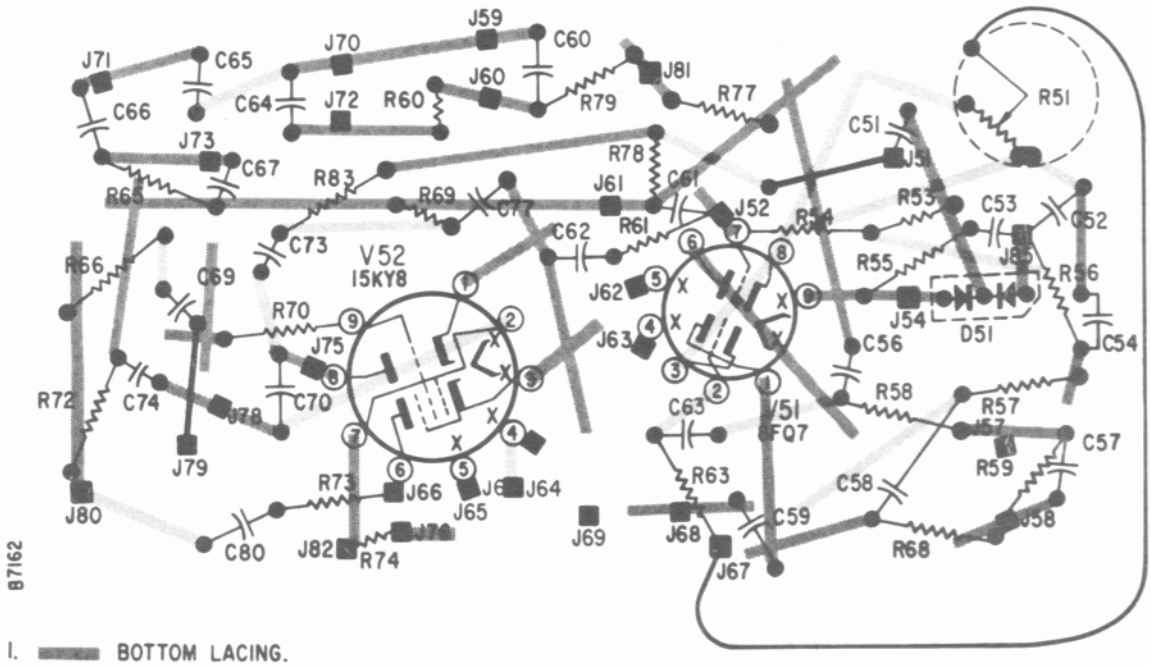
Caution: Discharging or metering of second anode of picture tube must be to main chassis only.

PART NO. 94-3111



NOTES:
1. WIRING DIAGRAM IS SHOWN FROM CIRCUIT SIDE OF BOARD.
2. SOLID LINES INDICATE WIRE JUMPERS.
3. WIRE JUMPER UNDER V51 TUBE SOCKET BETWEEN PIN NO. 3 & PIN NO. 8, NOT SHOWN.

Wiring Diagram, Vertical-Horizontal Oscillator Circuit Board



1. ▬ BOTTOM LACING.
2. ▬ TOP LACING.
3. SOLID LINES INDICATE WIRE JUMPERS.
4. WIRING DIAGRAM IS SHOWN FROM BOTTOM OF LACED BOARD.

Wiring Diagram, Vertical-Horizontal Oscillator Laced Board

TELEVISION ADJUSTMENTS

FOCUS ADJUSTMENT

The focus lead of the Picture Tube Socket (Blue with a connector) may be connected to any of the three Keller wrap posts (Ground J61, no post. B+ 142 volts J70, and B Boost (filtered) 480 volts J60). See Vertical-Horizontal Diagram. Since each Picture Tube differs in characteristics, when replacing the tube, connect the focus lead (Blue) to each of the four Keller posts in turn. The lead should be permanently connected to the post which gives best focus at maximum Brightness.

DEFLECTION YOKE, CENTERING RING AND BEAM ALIGNER ADJUSTMENT

Follow this procedure in adjusting the Deflection Yoke, Centering Rings and Beam Aligner (if required)

1. Turn the receiver on and disconnect the antenna.
2. The deflection yoke is held on the neck of the picture tube by a clamp device. Loosen the clamp, by unscrewing the screw on the clamp, and carefully move the yoke as far forward as possible on the neck of the picture tube. Rotate the yoke until the top and bottom edges of the raster are squared with the chassis. Tighten the screw.

NOTE: A Width Device is located between the Deflection Yoke and the neck of the picture tube.. This must be adjusted before the Yoke clamp is tightened.

3. Center the raster horizontally and vertically, and eliminate shaded corners by simultaneously, but independently, rotating the centering rings until the best effect is obtained.
4. Turn the brightness control to the point giving normal picture brilliance. Maintain brightness at this level during the following adjustments. Center the contrast control.
5. Position the Beam Aligner on the base of the picture tube. For correct orientation, one side of the Beam Aligner is marked with a Part Number. This side of the magnet should be on top, with the magnet on the anode lead side of the tube. Move the Beam Aligner forward and backward and rotate on the neck of the picture tube to the point which produces the best focus.

NOTE: Some Picture Tubes may not have a Beam Aligner in which case step 5 should be ignored. Since there is some interaction between the Beam Aligner and the Centering Rings, the two may require readjustment to obtain the best performance.

WIDTH DEVICE ADJUSTMENT

The Width Device is a piece of metallic foil attached to a sheet of plastic; it forms a half circle around the top half of the picture tube neck. (During all adjustments, the Width Device must remain centered on the top half of the picture tube neck.) Be sure that the Width Device is pulled as far toward the base of the picture as possible. The Width Device should be left in this position unless further adjustment is necessary. For further adjustment, follow steps given below:

1. Loosen the screw on clamp which secures the Deflection Yoke to the picture tube.
2. During the following adjustment hold the Deflection Yoke in position and do not disturb the relative position between the Deflection Yoke and the picture tube. Slide the Width Device forward or backward until the picture has proper width. The plastic corners can be bent to ease moving.

NOTE: The Width Device may affect the vertical sweep, in which case, the Vertical Height and Vertical Linearity controls may have to be readjusted when the width adjustment has been completed.

HORIZONTAL FREQUENCY AND HORIZONTAL STABILIZER CONTROL ADJUSTMENT (Field)

1. Tune set to an active channel.
2. **Short out L103 (Horizontal Stabilizer Coil) by connecting a jumper across J57 and J58.**
3. Turn variable cathode resistor (R51) completely counter-clockwise.
4. Advance R51 SLOWLY clockwise until picture just locks in.
5. Remove jumper from horizontal stabilizer coil.
6. Lock in picture by adjusting the horizontal stabilizer coil, which in effect is the Horizontal Hold Control.

HORIZONTAL FREQUENCY AND HORIZONTAL STABLIZER CONTROL ADJUSTMENT (Shop)

When the Horizontal Stabilizer (Horizontal Hold) control will no longer bring the receiver into horizontal sync., the following procedure must be used.

1. Turn set on and tune it to an active channel.
2. **Short out L103 by connecting a jumper across J57 and J58.**
3. Connect a high impedance voltmeter to (J52) Pin 7, V51.
4. Adjust 1K ohm Horizontal Frequency Control (R51) so picture is in sync and voltmeter reads + .5 volt.
5. **Remove shorting jumper from L103**
6. **Adjust L103 so that it is in frequency and voltmeter reads 0 volts.**
7. Remove voltmeter.

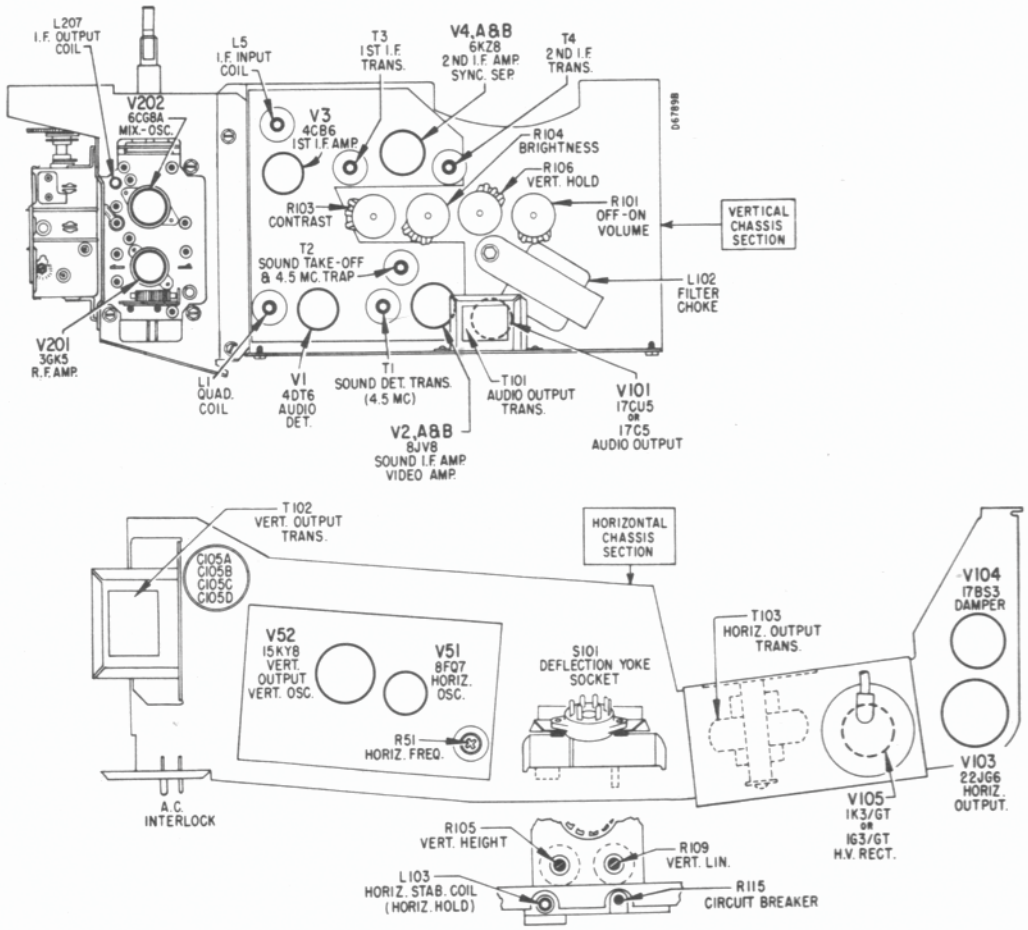
TUNER ADJUSTMENT

If the range of the fine tuning control is not adequate to tune in a clear picture on one or more channels, the respective channel oscillator range slug requires adjustment. This can be done in the following manner:

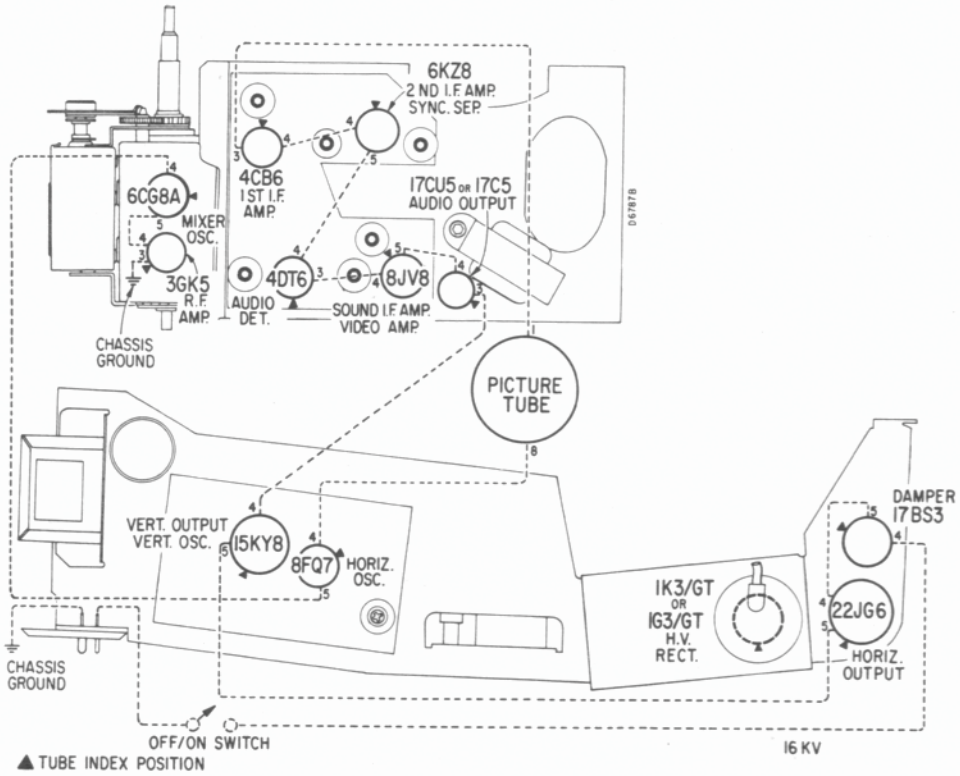
(1) Set the fine tuning control to the center of its range. The fine tuning control is approximately at the center of its range when the flat portion on the fine tuning shaft is parallel to the top of the tuner.

(2)* Adjust - with a non-metallic blade screwdriver for clearest picture. Extreme care should be taken not to exert undue pressure on the slug.

* If more than one channel requires the above adjustment, the order of channel adjustment is unimportant since each oscillator range adjustment is independent of the other.



CHASSIS VIEW



TUBE LAYOUT

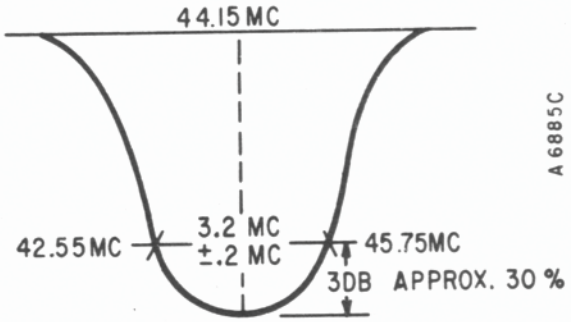


FIGURE 1

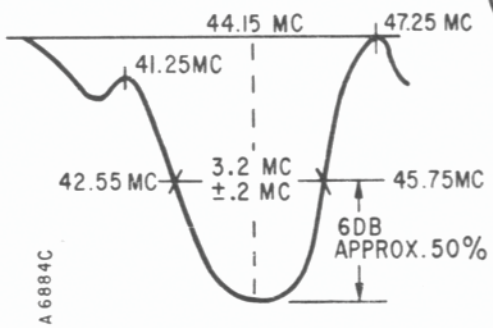


FIGURE 2

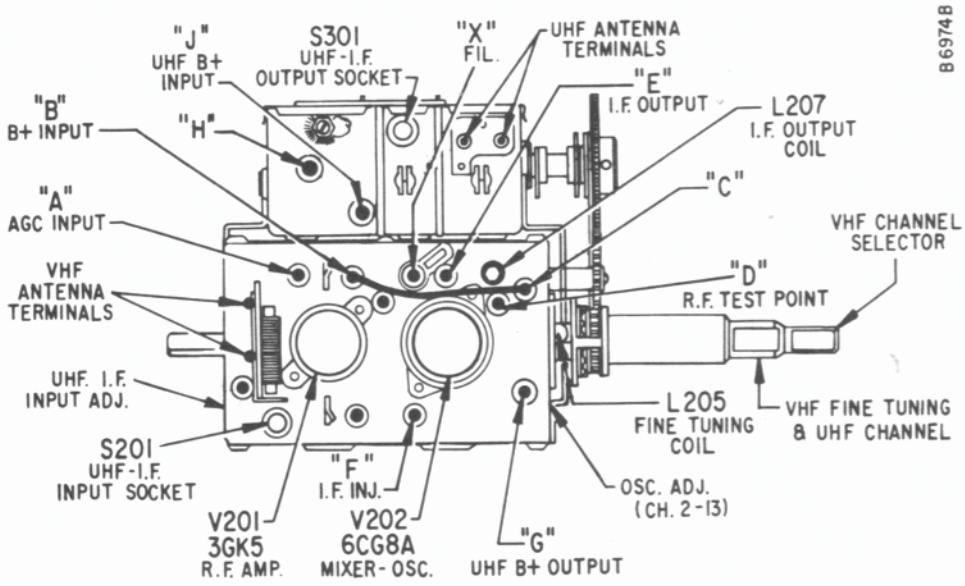


FIGURE 3, UHF - VHF TUNER VIEW

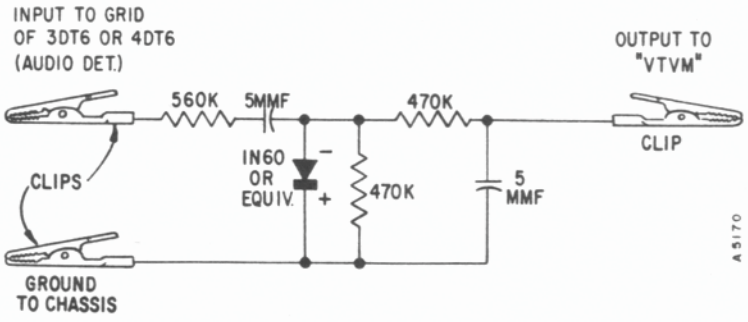


FIGURE 4

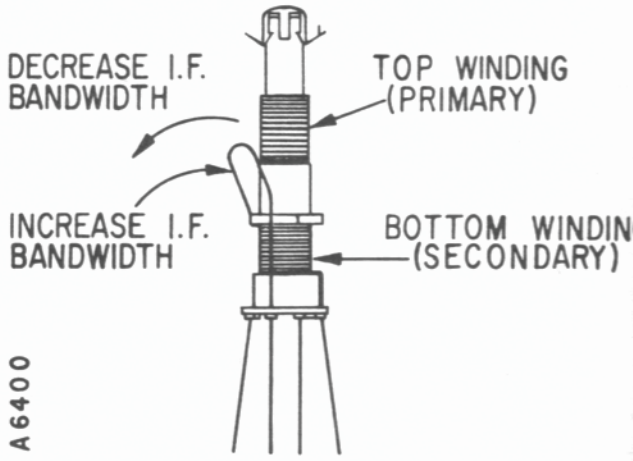


FIGURE 5

FILING INSTRUCTIONS

REMOVE AND DESTROY THE CORRESPONDING PAGE FROM THE "D" SECTION OF THE STANDARD NOMENCLATURE DIVISION 57 TELEVISION BLACK BINDER AND FILE THIS REVISED PAGE IN ITS PLACE.

D139

TELEVISION ALIGNMENT PROCEDURE

PRELIMINARY

Alignment is an exacting procedure and should be undertaken only when necessary. The following equipment is required for alignment work.

1. Hickok 610, 610A Signal Generator or equivalent where a 4.5 Mc Crystal controlled frequency (CW) is available. Diode Detector Probe (see Figure 4). The following I.F. Carriers are necessary.
   4.5 Mc Intercarrier Sound IF
   41.25 Mc Video IF Sound Carrier Frequency
   42.75 Mc Video IF Bandwidth Marker
   44.25 Mc Video IF Center Frequency
   45.75 Mc Video IF Picture Carrier Frequency
2. Electronic voltmeter (VTVM)
3. RF Sweep generator with a frequency range of 40 to 50 Mc with a sweep width of at least 10 Mc, having an adjustable output of at least 0.1 volts.
4. Cathode ray oscilloscope, preferably with a wide band vertical amplifier and an input calibrating source.
5. Isolation transformer.

PRELIMINARY ALIGNMENT NOTES

a. It is recommended that the receiver be connected to an isolation transformer during alignment. Allow at least 5 minutes for set to warm up before any alignment is attempted.

b. Connect oscilloscope hot lead through 10K ohm isolation resistor to Point C. Connect ground lead of oscilloscope directly to main chassis. Adjust signal input to maintain 2 volts peak to peak.

c. Apply -3 volts bias to AGC line, -side to Point B +side to chassis.

d. Connect correct signal generator as shown in chart below.

e. Clip hot lead of marker generator to the insulation of RF sweep generator hot lead. Connect ground lead to chassis.

VIDEO I.F. ALIGNMENT

Step	Sweep Generator (40-50 MC) Connect To	Marker Generator See Note Above	Output Waveform	Adjust	Remarks
1.	Pin 1 of 4CB6 (V3) thru .001 mfd. Cap	44.25 MC	Figure 1	T4	Adjust T4 for maximum response at 44.25 Mc.
2.	Same	Same	Same	T3 (Top)	Turn bottom core of T3 to bottom of coil form before adjusting T3 top. Adjust T3 top for maximum response at 44.25 Mc.
3.	Same	45.75 MC 42.75 MC	Same	T3 (Bottom)	Adjust T3 (Bottom) for symmetry of response shown in Figure 1.
4.	Same	45.75 MC	Same	T3 (Top)	Readjust T3 top to position the 45.75 Mc marker at the 3 db point of the response curve.
5.	If necessary, repeat steps 1 through 4 to obtain proper response. NOTE: If proper 3.2 db bandwidth is not obtained (3.2 Mc ± .2 Mc), refer to Bandwidth Loop Adjustment.				
6.	Point "F" IF Injection See Figure 3.	41.25 MC	Figure 2	L5 (Top)	Adjust L5 top for minimum response at 41.25 Mc.
7.	Same	45.75 MC	Same	L207 Tuner IF Output Coil	Adjust L207 to position the 45.75 Mc marker at the 6 db point of response curve.
8.	Same	42.75 MC 45.75 MC	Same	L5 (Bottom)	Adjust L5 (bottom) for symmetry of response in Figure 2.
9.	If necessary, repeat steps 6 through 8 to obtain response curve of Figure 2.				

BANDWITH LOOP ADJUSTMENT

The first I.F. transformer has a vertical hairpin loop in the secondary winding. This loop must not be touched unless the bandwidth specifications (3 Mc ± .2 Mc) are incorrect. Adjust as follows:

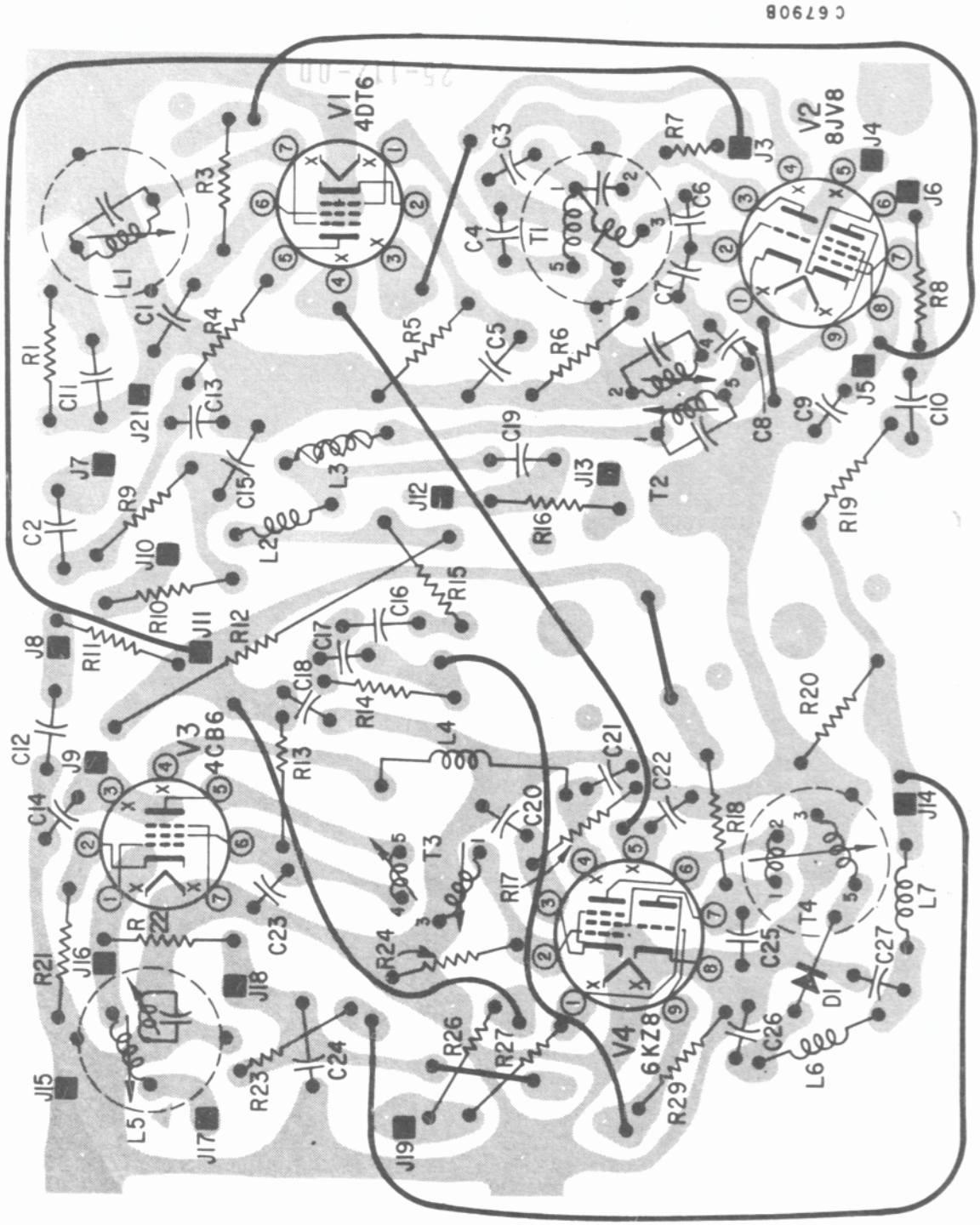
1. To narrow the I.F. response curve, pull the loop away from the primary of T3 (top). Repeat steps 2 through 5 of the Video I.F. Alignment. See Figure 5.
2. To broaden the I.F. response curve, press the loop toward the primary of T3 (top). Repeat steps 2 through 5 of the Video I.F. Alignment. See Figure 5.

SOUND ALIGNMENT

PRELIMINARY

Connect -10 volts bias to point (B). This will disable the Video I.F. circuits.

STEP	SIGNAL GENERATOR FREQUENCY	SIGNAL GENERATOR CONNECT TO	METER CONNECTION VTVM	ADJUST
1.	4.5 Mc Xtal Controlled	Pin 7 of 8JV8 (V2B)	Pin 1 of 4DT6 thru a diode detector probe. See Fig. 4	T1 (single core) T2 (top & bottom) for maximum output on VTVM.
2.	Same – Output should be greater than 10 Kuv	Same	J7	L7 (single core) for maximum. NOTE: Two peaks may be observed, tune to the highest peak. This is a sharp peak and must be adjusted carefully.
3.	Remove all equipment.			
4.	Set fine tuning for a normal picture and if necessary touch up quadrature coil (L1) or best sound.			
5.	Touch up the 4.5 Mc trap (top of T2) for minimum sound beat in picture.			



NOTES:

1. WIRING DIAGRAM IS SHOWN FROM CIRCUIT SIDE OF BOARD.
2. SOLID LINES INDICATED WIRE JUMPERS.

Wiring Diagram, I.F. Sync. Sound Circuit Board

FILING INSTRUCTIONS

REMOVE AND DESTROY THE CORRESPONDING PAGE FROM THE "C" SECTION OF THE STANDARD NOMENCLATURE DIVISION 57 TELEVISION BLACK BINDER AND FILE THIS REVISED PAGE IN ITS PLACE.

456.60542 528.60542 529.60542
456.60543 528.60543 529.60543

Schematic Location	Part Number	Description
R70	63-15301	15K ohm
R73	63-10301	10K ohm
R77	63-12501	1.2 megohm
R101	24-644	Control Volume, 1 megohm
R102	63-27101	270 ohm
R103	24-704	Control Contrast, 800 ohm
R104	24-703	Control Brightness, 3.4 megohm
R105	24-714	Control Vertical Height, 3 megohm, 600 K ohm stop. 795A 2.0
R106	24-~~706~~	Control Vertical Hold, ~~1.5~~ megohm
R107	61-27501-3	2.7 megohm, Dep. Oxide
R108	61-15501-3	1.5 megohm, Dep. Oxide
R109	24-715	Control Vert. Linearity
R110	62-82121-4	820 ohm, 2W.
R111	63-68501	6.8 megohm
R112	61-10201-3	Dep. Oxide, 1K ohm
R113	62-39921-2	3.9 ohm, 2W., w.w.
R114	63-47202	4.7K ohm, 20%
R115	43-20-2	Circuit Breaker
R116	61-191-0	4.5 ohm, 10W., w.w.
R117	61-33211-3	Dep. Oxide, 3.3K ohm, 1W.
R118	63-56221	5.6K ohm, 2W.
R150	63-27311	27K ohm, 1w.

TRANSFORMERS AND COILS

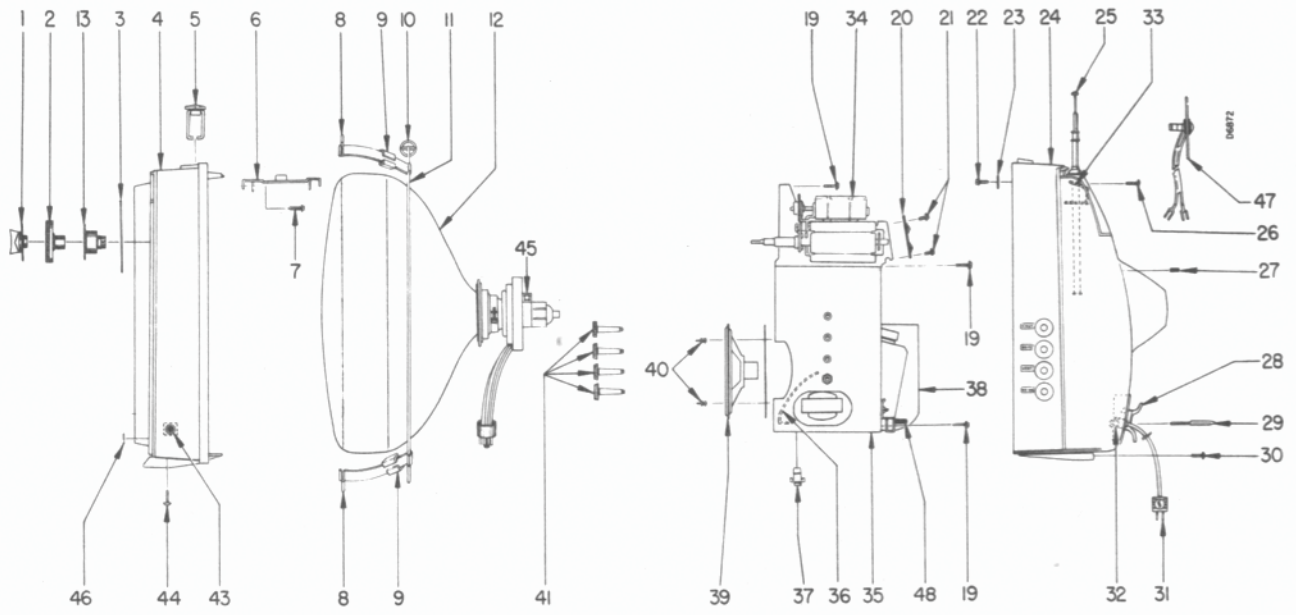
T1	10-53-3	Transformer, 4.5 mc. Sound I.F.
T2	10-209-1	Transformer Sound Take-Off & 4.5 mc Trap
T3	10-56-3	Transformer 1st I.F.
T4	10-54-3	Transformer, 2nd I.F.
T101	80-192-1	Transformer, Audio Output
T102	80-15-2	Transformer, Vertical Output
T103	80-26-3	Transformer, Horizontal Output
L1	10-74-5	Coil Quadrature
L2	10-206-1	Coil Peaking 450 uh
L3	10-207-1	Coil Peaking 270 uh wound on 4.7K ohm-Resistor
L4	10-156-1	Coil Filament Choke
L5	10-55-3	Coil I.F. Input
L6	10-65-1	Coil Tweet, 12 uh
L7	10-148-1	Coil Peaking 60 uh
L101	10-149-1	Choke, Line Radiation
L102	80-37-6	Filter Choke
L103	10-75-5	Coil, Horizontal Stabilizer
L104	80-45-~~4~~ ~~80-35-4~~	Deflection Yoke & Plug 80-45-4A
L105	10-242-1	Coil, Horizontal Suppression Choke
L106	10-124-1	Coil, Horizontal Suppressor, R.F. Choke, 10 uh
D1	86-10-1	Diode Germanium 1N60
D51	86-9-1	Dual Diode
SD101	86-1-3	Rectifier, Silicon 500 ma.

MISCELLANEOUS CHASSIS PARTS

Part Number	Description
38-6223-4	Service Data Sheet
22-25-2	Palnut 3/8-32 (Volume & On-Off Control Mtg.)
57-806187	Screw Type 1 (8x3/8 S.H.W.H.) CPS. (Filter Choke Mtg.)
57-804187	Screw Type 1 (8x 1/4 S.H.W.H.) CPS. (Audio Output Trans. Mtg.)
45-286-2	Socket, Tube 9 Pin Molded (V103)
45-240-2	Socket, Tube (V102)
45-248-2	Socket, Tube (V105)
45-286-2	Socket, Tube Molded 9 Pin (V104)
45-180-2	Socket, Tube Octal Yoke (S101)
45-236-2	Socket, Wire Grip (V101)
45-69-0	Plug, Interlock
70-646-0	Spring, Dag
76-489	Terminal Strip (6 terminals)
76-507	Terminal Strip (3 terminals)
76-533	Terminal Strip (Wire wrap)
57-808654	Screw Type A (8 x ½ Phil. Truss. Hd.) BPS. (Secures Hi-Voltage Socket)
21-782-0	Cover (High Voltage Socket)
23-38-3	Lead, High Voltage
21-1328-0	Cover, High Voltage
35-4903	Assembly, I.F. Sync. Sound Circuit Board
25-112-0	Circuit Board Only
35-1909	Assembly, Vertical-Horizontal Oscillator Circuit Board
25-92-0	Circuit Board Only
35-1009	Assembly, Vertical-Horizontal Oscillator Laced Circuit Board
25-88-0	Laced Circuit Board Only
45-243-2	Socket Novar, 9 Pin Molded (V52)
45-244-2	Socket Novar, 9 Pin Min. (V51)
45-270-2	Socket, Tube 7 Pin (V1,V3)
45-272-2	Socket, Tube 9 Pin (V2,V4)
71-75-2	Shield Coil & Transformer (T1,T2,L1,L5)
71-71-2	Shield, I.F. Output
71-72-2	Shield, Radiation
45-25-1	Earphone Jack (S102)
33-3-2	Earphone with Plug
52-2283-0 OR - 52-2285-0	Knob Indicator (UHF) (Chassis 456.60542 528.60542 529.60542) Knob Indicator (UHF) (Chassis 456.60543 528.60543 529.60543) The above knobs are used on Models 5110-5112-5113-5114 only.
52-2223-0 OR - 52-2284-0	Knob Indicator (UHF) Knob Indicator (UHF) (Chassis 456.60542 528.60542 529.60542) (Chassis 456.60543 528.60543 529.60543) The above knobs are used on Models 5115-5116-5117-5118-5119-5123 only.

Silvertone® TELEVISION CABINET PARTS LIST

MODELS
5115
5116
5117
5118
5119



KEY NO.	PART NO.	DESCRIPTION
	38-6360	Owner's Manual
	38-6359-1	Cabinet Parts List
1.	52-2221-0	Knob, VHF, Channel Selector (Models 5116 5117, 5118 and 5119)
	52-2343-0	Knob, VHF Channel Selector (Model 5115)
2.	52-2226-0	Knob, VHF Fine Tuning/ UHF Selector (Models 5116, 5117, 5118 and 5119)
	52-2341-0	Knob, VHF Fine Tuning/ UHF Selector (Model 5115)
3.	40-520-0	Escutcheon (Models 5116, 5117, 5118 and 5119)
	40-576-0	Escutcheon (Model 5115)
4.	42-585-0	Cabinet, Front (Ivory-Model 5115) Also order 40-576-0 and 40-575-0)
	42-544-0	Cabinet, Front (Brown Trim-Model 5116) (Also order 40-520-0 and 40-518-0)
	42-545-0	Cabinet, Front (Red Trim-Model 5117) (Also order 40-520-0 and 40-518-0)
	42-547-0	Cabinet, Front (Coppertone Trim-Model 5118) (Also order 40-520-0 and 40-518-0)
	42-549-0	Cabinet, Front (Wedgewood Trim-Model 5119) (Also order 40-520-0 and 40-518-0)
5.	49-1633	Handle with Clips (Models 5116, 5118 and 5119)
	49-1600	Handle with Clips (Models 5115 & 5117)
6.	11-2588	Bracket, Handle
7.	97-1190	Screw, Type 25 (8 x 5/8" Sltd. Hex. Wash. Hd. 1/2 1/32)
8.	22-374-0	Retainer, Harness
9.	28-339	Pad, Harness Retainer (Model 5115)
10.	70-695-0	Spring, Tension
11.	22-138-3	Clamp, Wire
12.		Picture Tube Type (19DQP4 or 19DWP4)
13.	†	Knob, UHF Indicator (Inc. 22-246-1)
	22-246-1	Compression Ring

KEY NO.	PART NO.	DESCRIPTION
19.	57-810189	Screw, Type 25 (8 x 5/8 Sltd. Hex. Wash. Hd.)
20.	76-493	Terminal Board (Antenna)
21.	**	Screw, Type 1 (#8 x 1/4" Sltd. Hex. Wash. Hd.)
22.	57-808189	Screw, Type 25 (8 x 1/2" Sltd. Hex. Wash. Hd.)
23.	22-357-0	Antenna Retainer
24.	42-491-0	Cabinet Back (Models 5116, 5118 and 5119)
	42-492-0	Cabinet Back (Models 5115 & 5117)
25.	82-248-0	Antenna, Rod and Ball Assembly
	26-181	Seat Ball
26.	97-1240	Screw, Type A (#8 x 3/4"R & P Truss Hd.) Cabinet back to Handle Bracket
27.	***	Grommet, Strain Relief, (Antenna Leads)
28.	22-201-1	Clip, Line Cord Storage
29.	39-411-3	Rod, Horizontal Hold Adjustment
30.	97-1239	Screw, Type 25 (#8 x 3/4"R & P Truss Hd.) Cabinet Front to Back
31.	23-134-0	Line Cord, Beige (also order 22-212-1)
32.	22-212-1	Clip, Line Cord Mtg.
33.	11-2431	Bracket, Antenna Mounting.
34.	*	VHF/UHF Tuner
	57-604185	Screw, Type B (6 x 1/4" Sltd. Hex. Wash. Hd.) Mounts Tuners to Bracket
	57-804187	Screw, Type 1 (8 x 1/4" Sltd. Hex. Wash. Hd.) Mounts Bracket to Chassis
35.	*	Main Chassis
36.	70-646-0	Spring, Dag Grounding
37.	22-153-5	Anchor, Screw
	97-1239	Screw, Type 25 (#8 x 3/4" R & P Truss Hd.) Chassis to Bottom Cabinet Back
38.	44-343-1	Shield, Heat Reflector
39.	33-379-4	Speaker 3" x 5"
	37-164-0	Insulator, Speaker

PARTS LIST CONTINUED ON BACK OF THIS SHEET

†See Miscellaneous Chassis Parts List for correct Part Number.

*For Chassis Repair Parts, see Chassis Parts List corresponding to Identification Plate Number located on Chassis.

**Refer to STANDARD HARDWARE Section of Source 528.00 Authorized Price List for availability and ordering information.

***Not supplied as a repair part.

FILING INSTRUCTIONS

REMOVE AND DESTROY THE CORRESPONDING PAGE FROM THE "B" SECTION OF THE DIVISION 57 STANDARD NOMENCLATURE TELEVISION BLACK BINDER AND FILE THIS REVISED PAGE IN ITS PLACE

Refer to the Div. 57 Authorized Price List 528.00 for current selling prices, availability, and ordering information.

SF57—

PARTS LIST CONTINUED FROM FRONT OF THIS SHEET

KEY NO.	PART NO.	DESCRIPTION
40.	65-419	Rivet, Plastic (Spkr. Mtg.)
41.	52-2379-0	Knob, Control (Gray/Beige) (Inc. 22-257-1) (Models 5116, 5118 and 5119)
	52-2380-0	Knob, Control (Ivory) (Model 5117) (Inc. 22-257-1)
	52-2381-0	Knob, Control (Gray) (Inc. 22-257-1) (Model 5115)
	22-257-1	Compression Ring
43.	45-25-1	Jack, Earphone
	33-3-2	Earphone with Plug
44.	97-1239	Screw, Type 25 (#8 x 3/4" R & P Truss Hd.) Chassis to Bottom Cabinet Front
45.	22-145-3	Clamp, Yoke
	22-207-2	Speednut
	58-249	Washer
	57-814185	Screw, Type B (#8 x 7/8" Slt. Hex. Wash. Hd.)
46.	40-518-0	Escutcheon, Emblem (Models 5116, 5117, 5118 and 5119)
	40-575-0	Escutcheon, Emblem (Model 5115)
47.	82-236-0	Antenna, UHF
48.	37-18-2	Tubing (Reset Button Extension)